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CLAIMS

1. A computer-readable medium having computer-executable components, comprising:

at least one agent having at least one sensor component including a goal or change method component and at least on e behavior component;

wherein the at least one sensor component generates at least one event based at least in part on at least one generated value from the goal or change method component, and the at least one behavior component determines whether to acti vate a thread of execution based at least in part on the at least one generated event from the at least one sensor component.

2. The computer-readable medium of claim 1, wherein the at least one behavior component determines whether to record the at least one generated event.

3. The computer-readable medium of claim 1, wherein the at least one event is one of a changes or updates event.

4. The computer-readable medium of claim 1, wherein the at least one behavior component is external to the agent of the at least one event generating sensor component.

5. The computer-readable medium of claim 1, wherein the activation of the at least one behavior component includes generating at least one call.

6. The computer-readable medium of claim 5, wherein the at least one sensor component may be activated by its goal or change method component to generate at least one event based at least in part on the at least one call.

7. The computer-readable medium of claim 6, wherein the at least one sensor component is included in an agent external to the agent of the at least one call generating behavior component.

8. The computer-readable medium of claim 1, wherein a behavior component may subsume or resume at least one other behavior component or agent based at least in part on the at least one generated event from the at least one sensor component.

9. The computer-readable medium of claim 1, wherein the at least one behavior component generates a status event upon the activation of a thread of execution, the status event being receivable by at least one other behavior component.

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10. The computer-readable medium of claim 1, wherein the at least one behavior component generates a status event upon the completion of a thread of execution, the status event being receivable by at least one other behavior component.

11. The computer-readable medium of claim 1, wherein the at least one behavior component determines whether to activate a thread of execution based on an independent triggering condition.

12. The computer-readable medium of claim 11, wherein the independent triggering condition may further determine a priority status for the activation of a particular thread of execution, and wherein a plurality of threads of execution may be performed sequentially based on their priority status for activation.

13. The computer readble medium of claim 12, wherein at least one of a ContinueWhen, resumeWhen and complete When statement within or outside the at least one behavior component is operable to synchronize threads of execution based o n their priority status for activation.

14. The computer-readable medium of claim 11, wherein the independent triggering condition includes at least one when statement and at least one if statement, wherein the when statement indicates events to which the independent triggering condition responds to become active and the if statement is based on predetermined filtering values.

15. The computer-readable medium of claim 11, wherein the independent triggering condition requires a plurality of generated events to become active.

16. The computer-readable medium of claim 11, wherein the independent triggering condition is based on the local perception of the at least one behavior component.

17. The computer-readable medium of claim 1 4, wherein the at least one beh avior component activates a thread of execution for an active independent triggering condition before the independent triggering condition becomes active again.

18. The computer-readable medium of claim 1, wherein the at least one behavior and sensor components are defined at least one keyword, wherein the at least one keyword indicates at least one of a particular agent, at least one behavior or sensor and a particular event for activating an independent triggering condition.

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19. The computer-readable medium of claim 18, wherein the at least one keyword is operable to indicate any of a behavior or sensor component, agent or event unknown to the at least one agent.

20. The computer-readable medium of claim 18, wherein the at least one keyword is operable to indicate a predetermined agent class.

21. The computer-readable medium of claim 20, wherein the at least one keyword may indicate a particular agent within a predetermined agent class.

22. The computer-readable medium of claim 18, wherein the at least one keyword is operable to indicate when a particular behavior or sensor may be activated.

23. The computer-readable medium of claim 1, wherein the at least one agent may generate an event.

24. A computer program embodied on a computer-readable medium for enabling a behavior based multi-agent computing system, comprising:

a code segment for receiving a request; and

an execution framework comprising:

a plurality of agents having at least one sensor component, including at least one goal or change method component, and at least one normal, exhaustive or redundant behavior component;

wherein the at least one goal or change method component generates at least one value, the at least one sensor component generates at least one event based at least in part on the at least one generated value from the at least one goal or change method component, and the at least one behavior component determines whether to activate a thread of execution based at least in part on at least one generated event from the at least one sensor component.

25. The computer program embodied on a computer-readable medium for enabling a behavior based multi-agent computing system of claim 24, wherein the request is received from at least one agent.

26. The computer program embodied on a computer-readable medium for enabling a behavior based multi-agent computing system of claim 24, wherein the execution framework is layered over an object-oriented language construct to become an agent-oriented language construct, wherein objects and agents are inter changeable components within the agent-oriented language construct.

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27. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 26, wherein the agent -oriented language construct comprises an object-oriented-based language construct.

28. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 26, wherein the agents form communites of agents being able to replicate.

29. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 2 8, wherein the agents comprise a community of agents that are able to migrate between replicated communities.

30. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 2 9, wherein an agent may migrate between communities through knowledge of a target community identification parameter.

31. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 29, wherein an agent may search for a target community.

32. The computer program embodied on a computer -readable medium for enabling a behav ior based multi -agent computing system of claim 2 6, wherein the layered system allows through agent communities spawning themselves to work in grid computing.

33. The computer program embodied on a computer -readable medium for enabling a behavior based multi-agent computing system of claim 2 6, wherein an agent may be active across communities through the use of at least one stub, wherein a stub may hold at least one sensor and are automatically generated.

34. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 26, wherein the agents become a part of the namespaces that may be brought together to achieve a service.

35. The computer program embodied on a computer -readable medium for enabling a behavior based multi -agent computing system of claim 26, wherein a service may be indicated by a keyword or by an attribute that annotates the namespace.

36. The computer program embodied on a computer -readable medium for enabling a behavior based multi-agent computing system of claim 26, wherein at least one agent is operable to represent a neuron of a neural network, the at least one agent having at least one triggering

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value as the at least one sensor, and the at least one behavior component is   operable to respond to at least one event from at least one triggering value in at least one lower layer.

37. The computer program embodied on a computer -readable medium for enabling a behavior based multi-agent computing system of claim 26, wherein at 1 east one agent utilizes at least one mutation or cross -over operator in the at least one behavior to implement at least one self - writing learning agent, thereby allowing the computer program to evolve automatically.

38. The computer program embodied on a c omputer-readable medium for enabling a behavior based multi-agent computing system of claim 26, wherein at least one behavior is assigned to at least one file to manage itself.

39. An agent-oriented database, comprising:

a plurality of fields including at least one agent;

the at least one agent having at least one sensor component including a goal or method change component;

wherein the at least one sensor component is operable to generate at least one event based at least in part on at least one generated value from the goal or method change component.

40. The database of claim 39, wherein the at least one agent includes a behavior component.